

IN THE CLAIMS:

Please amend Claims 18, 20, 82, 84, 114 and 115 as shown below. The claims, as pending in the subject application, now read as follows:

1. (Withdrawn) An image processing system comprising:

calculating means for calculating a degree of similarity from among a plurality of image frames of dynamic image data;

designating means for designating a length of a digest dynamic image;

determining means for determining scene-change frames based on the degree of similarity calculated by said calculating means; and

dynamic image means for performing automatic editing and preparation of the digest dynamic image of the dynamic image data of the designated length by merging frames for a specified duration of each scene delimited by a scene change.

2. (Withdrawn) The image processing system according to claim 1, further comprising:

detecting means for detecting blank scenes; and

exception processing means for performing exception processing in which an initial image frame after exclusion of a blank scene detected at the beginning of the dynamic image by said detecting means is deemed a scene-change frame.

3. (Withdrawn) The image processing system according to claim 2, wherein said exception processing means also performs exception processing in which a final image frame after exclusion of a blank scene detected at the end of the dynamic image by said detecting means is deemed a scene-change frame.

4. (Withdrawn) The image processing system according to claim 3, wherein when a time duration for each scene-change frame of two scenes in close proximity is less than the specified duration, frame information from a scene-change frame of the first scene and frame information through a frame from the scene-change frame of the second scene are treated as the result of merging of the scene-change frames of the two scenes into one scene whose duration is equal to the specified duration.

5. (Withdrawn) The image processing system according to claim 4, wherein when the duration of the scene-change frame of the second scene to be merged falls within a specified duration of the scene-change frame of the first scene, all the frame information of the scene-change frame of the second scene are merged with the scene-change frame of the first scene.

6. (Withdrawn) The image processing system according to claim 5, wherein when a mode which provides a target duration for the completed digest dynamic image has been indicated, a digest having a duration in the vicinity of the target duration is prepared by first finding all of the scene-change frames of the dynamic image, and then performing processing for merging scenes into the digest, preferentially beginning with scenes whose

scene-change frame has a low degree of similarity to the immediately preceding frame or some preceding frames.

7. (Withdrawn) The image processing system according to claim 6, wherein when there are few scene changes, and the digest dynamic image is more than a certain threshold value shorter than the indicated duration, a digest having a duration in the vicinity of the target duration is prepared by gradually increasing the specified duration for addition of each scene.

8. (Withdrawn) The image processing system according to claim 7, wherein for a dynamic image for which no scene change has been detected, if there is a blank scene at the beginning of the dynamic image, the blank scene is excluded, and frames are extracted from the first non-blank scene for the target duration and treated as the digest dynamic image.

9. (Withdrawn) An image processing method comprising the steps of:  
calculating a degree of similarity from among a plurality of image frames of dynamic image data;  
designating a length of a digest dynamic image;  
determining scene-change frames based on the calculated degree of similarity; and

performing automatic editing and preparation of the digest dynamic image of the dynamic image data of the designated length by merging frames for a specified duration from each scene-change frame.

10. (Withdrawn) The image processing method according to claim 9, further comprising the steps of:

detecting blank scenes; and

performing exception processing in which an initial image frame after exclusion of a blank scene detected at the beginning of the dynamic image in said detecting step is deemed a scene-change frame.

11. (Withdrawn) The image processing method according to claim 10, further comprising the step of:

performing exception processing in which a final image frame after exclusion of a blank scene detected at the end of the dynamic image in said detecting step is deemed a scene-change frame.

12. (Withdrawn) The image processing method according to claim 11, wherein when a time duration for each scene-change frame of two scenes in close proximity is less than the specified duration, frame information from a scene-change frame of the first scene and frame information through a frame from the scene-change frame of the second scene are treated as the result of merging of the scene-change frames of the two scenes into one scene whose duration is equal to the specified duration.

13. (Withdrawn) The image processing method according to claim 12, wherein when the duration of the scene-change frame of the second scene to be merged falls within a specified duration of the scene-change frame of a first scene, all the frame information of the scene-change frame of the second scene are merged with the scene-change frame of the first scene.

14. (Withdrawn) The image processing method according to claim 13, wherein when a mode has been indicated which provides a target duration for the completed digest dynamic image, a digest having a duration in the vicinity of the target duration is prepared by first finding all of the scene-change frames of the dynamic image, and then performing processing for merging scenes into the digest, preferentially beginning with scenes whose scene-change frame has a low degree of similarity to the immediately preceding frame or some preceding frames.

15. (Withdrawn) The image processing method according to claim 14, wherein when there are few scene changes, and the digest dynamic image is more than a certain threshold value shorter than the indicated duration, a digest having a duration in the vicinity of the target duration is prepared by gradually increasing the specified duration for addition of each scene.

16. (Withdrawn) The image processing system according to claim 15, wherein for a dynamic image for which no scene change has been detected, if there is a blank scene at the beginning of the dynamic image, the blank scene is excluded, and frames

are extracted from the first non-blank scene for the target duration and treated as the digest dynamic image.

17. (Withdrawn) A recording medium recording program code of an image processing method comprising the steps of:

calculating a degree of similarity from among a plurality of image frames of dynamic image data;

designating a length of a digest dynamic image;

determining scene-change frames based on the calculated degree of similarity; and

performing automatic editing and preparation of the digest dynamic image of the dynamic image data of the designated length by merging frames for a specified duration from each scene-change frame.

18. (Currently amended) An image processing system comprising:

calculating means for calculating a degree of similarity from among a plurality of image frames of dynamic image data;

determining means for determining scene-change frames based on the degree of similarity calculated by said calculating means; and

dynamic image preparation means for performing automatic editing and preparation of a digest dynamic image of the dynamic image data by merging a specified duration of frames having a low degree of similarity with an immediately preceding frame

or some preceding frames on receipt of instructions to prepare a dynamic digest such that the prepared digest dynamic image has a length according to a length designated by a user.

19. (Canceled)

20. (Currently amended) An image processing system comprising:

calculating means for calculating a degree of similarity from among a plurality of image frames of dynamic image data;

determining means for determining scene-change frames based on the degree of similarity calculated by said calculating means; and

dynamic image preparation means for performing automatic editing and preparation of a digest dynamic image of the dynamic image data by merging a specified duration of frames having a high degree of similarity with an immediately preceding frame or some preceding frames on receipt of instructions to prepare a quiet digest such that the prepared digest dynamic image has a length according to a length designated by a user.

21. (Canceled)

22. (Previously presented) The image processing system according to claim 18, further comprising:

detecting means for detecting blank scenes; and

exception processing means for performing exception processing in which an initial image frame after exclusion of a blank scene detected at the beginning of the dynamic image by said detecting means is deemed a scene-change frame.

23. (Canceled)

24. (Previously presented) The image processing system according to claim 20, further comprising:

detecting means for detecting blank scenes; and

exception processing means for performing exception processing in which an initial image frame after exclusion of a blank scene detected at the beginning of the dynamic image by said detecting means is deemed a scene-change frame.

25. (Canceled)

26. (Previously presented) The image processing system according to claim 22, wherein said exception processing means also performs exception processing in which a final image frame after exclusion of a blank scene detected at the end of the dynamic image by said detecting means is deemed a scene-change frame.

27. (Canceled)



28. (Previously presented) The image processing system according to claim 24, wherein said exception processing means also performs exception processing in which a final image frame after exclusion of a blank scene detected at the end of the dynamic image by said detecting means is deemed a scene-change frame.

29. (Canceled)

30. (Previously presented) The image processing system according to claim 26, wherein when a time duration for each scene-change frame of two scenes in close proximity is less than the specified duration, frame information from a scene-change frame of the first scene and frame information through a frame from the scene-change frame of the second scene are treated as the result of merging of the scene-change frames of the two scenes into one scene whose duration is equal to the specified duration.

31. (Canceled)

32. (Previously presented) The image processing system according to claim 28, wherein when a time duration for each scene-change frame of two scenes in close proximity is less than the specified duration, frame information from a scene-change frame of the first scene and frame information through a frame from the scene-change frame of the second scene are treated as the result of merging of the scene-change frames of the two scenes into one scene whose duration is equal to the specified duration.

33. (Canceled)

34. (Previously presented) The image processing system according to claim 30, wherein when the duration of the scene-change frame of the second scene to be merged falls within a specified duration of the scene-change frame of the first scene, all the frame information of the scene-change frame of the second scene are merged with the scene-change frame of the first scene.

35. (Canceled)

36. (Previously presented) The image processing system according to claim 32, wherein when the duration of the scene-change frame of the second scene to be merged falls within a specified duration of the scene-change frame of the first scene, all the frame information of the scene-change frame of the second scene are merged with the scene change frame of the first scene.

37. (Canceled)

38. (Previously presented) The image processing system according to claim 34, wherein when a mode has been indicated which provides a target duration for the completed digest dynamic image, a digest having a duration in the vicinity of the target duration is prepared by first finding all of the scene-change frames of the dynamic image, and then performing processing for merging scenes into the digest, preferentially beginning

with scenes whose scene-change frame has a low degree of similarity to the immediately preceding frame or some preceding frames.

39. (Canceled)

40. (Previously presented) The image processing system according to claim 36, wherein when a mode has been indicated which provides a target duration for the completed digest dynamic image, a digest having a duration in the vicinity of the target duration is prepared by first finding all of the scene-change frames of the dynamic image, and then performing processing for merging scenes into the digest, preferentially beginning with scenes whose scene-change frame has a low degree of similarity to the immediately preceding frame or some preceding frames.

41. (Canceled)

42. (Original) The image processing system according to claim 38, wherein when there are few scene changes, and the digest dynamic image is more than a certain threshold value shorter than the indicated duration, a digest having a duration in the vicinity of the target duration is prepared by gradually increasing the specified duration for addition of each scene.

43. (Canceled)

44. (Original) The image processing system according to claim 40, wherein when there are few scene changes, and the digest dynamic image is more than a certain threshold value shorter than the indicated duration, a digest having a duration in the vicinity of the target duration is prepared by gradually increasing the specified duration for addition of each scene.

45. (Canceled)

46. (Original) The image processing system according to claim 42, wherein for a dynamic image for which no scene change has been detected, if there is a blank scene at the beginning of the dynamic image, the blank scene is excluded, and frames are extracted from the first non-blank scene for the target duration and treated as the digest dynamic image.

47. (Canceled)

48. (Original) The image processing system according to claim 44, wherein for a dynamic image for which no scene change has been detected, if there is a blank scene at the beginning of the dynamic image, the blank scene is excluded, and frames are extracted from the first non-blank scene for the target duration and treated as the digest dynamic image.

49. (Canceled)

50. (Original) The image processing system according to claim 18, wherein a user is able to select and specify whether to save a digest as a file, or replay the digest and discard the data.

51. (Canceled)

52. (Original) The image processing system according to claim 20, wherein a user is able to select and specify whether to save a digest as a file, or replay the digest and discard the data.

53. (Canceled)

54. (Original) The image processing system according to claim 22, wherein a user is able to select and specify whether to save a digest as a file, or replay the digest and discard the data.

55. (Canceled)

56. (Original) The image processing system according to claim 24, wherein a user is able to select and specify whether to save a digest as a file, or replay the digest and discard the data.

57. (Canceled)

58. (Original) The image processing system according to claim 26, wherein a user is able to select and specify whether to save a digest as a file, or replay the digest and discard the data.

59. (Canceled)

60. (Original) The image processing system according to claim 28, wherein a user is able to select and specify whether to save a digest as a file, or replay the digest and discard the data.

61. (Canceled)

62. (Original) The image processing system according to claim 30, wherein a user is able to select and specify whether to save a digest as a file, or replay the digest and discard the data.

63. (Canceled)

64. (Original) The image processing system according to claim 32, wherein a user is able to select and specify whether to save a digest as a file, or replay the digest and discard the data.

65. (Canceled)

66. (Original) The image processing system according to claim 34, wherein a user is able to select and specify whether to save a digest as a file, or replay the digest and discard the data.

67. (Canceled)

68. (Original) The image processing system according to claim 36, wherein a user is able to select and specify whether to save a digest as a file, or replay the digest and discard the data.

69. (Canceled)

70. (Original) The image processing system according to claim 38, wherein a user is able to select and specify whether to save a digest as a file, or replay the digest and discard the data.

71. (Canceled)

72. (Original) The image processing system according to claim 40, wherein a user is able to select and specify whether to save a digest as a file, or replay the digest and discard the data.

73. (Canceled)

74. (Original) The image processing system according to claim 42, wherein a user is able to select and specify whether to save a digest as a file, or replay the digest and discard the data.

75. (Canceled)

76. (Original) The image processing system according to claim 44, wherein a user is able to select and specify whether to save a digest as a file, or replay the digest and discard the data.

77. (Canceled)

78. (Original) The image processing system according to claim 46, wherein a user is able to select and specify whether to save a digest as a file, or replay the digest and discard the data.

79. (Canceled)

80. (Original) The image processing system according to claim 48, wherein a user is able to select and specify whether to save a digest as a file, or replay the digest and discard the data.

81. (Canceled)



82. (Currently amended) An image processing method comprising the steps of:

calculating a degree of similarity from among a plurality of image frames of dynamic image data;

determining scene-change frames based on the calculated degree of similarity; and

performing automatic editing and preparation of a digest dynamic image of the dynamic image data by merging from each scene delimited by a scene change a specified duration of frames having a low degree of similarity with an immediately preceding frame or some preceding frames on receipt of instructions to prepare a dynamic digest such that the prepared digest dynamic image has a length according to a length designated by a user.

83. (Canceled)

84. (Currently amended) An image processing method comprising the steps of:

calculating a degree of similarity from among a plurality of image frames of dynamic image data;

determining scene-change frames based on the calculated degree of similarity; and

performing automatic editing and preparation of a digest dynamic image of the dynamic image data by merging from each scene delimited by a scene change a

specified duration of frames having a high degree of similarity with an immediately preceding frame or some preceding frames on [[pm]] receipt of instructions to prepare a quiet digest such that the prepared digest dynamic image has a length according to a length designated by a user.

85. (Canceled)

86. (Previously presented) The image processing method according to claim 82, further comprising the steps of:

detecting blank scenes; and

performing exception processing in which an initial image frame after exclusion of a blank scene detected at the beginning of the dynamic image in said detecting step is deemed a scene-change frame.

87. (Canceled)

88. (Previously presented) The image processing method according to claim 84, further comprising the steps of:

detecting blank scenes; and

performing exception processing in which an initial image frame after exclusion of a blank scene detected at the beginning of the dynamic image in said detecting step is deemed a scene-change frame.

89. (Canceled)

90. (Previously presented) The image processing method according to claim 86, further comprising the step of:

performing exception processing in which a final image frame after exclusion of a blank scene detected at the end of the dynamic image in said detecting step is deemed a scene-change frame.

91. (Canceled)

92. (Previously presented) The image processing method according to claim 88, further comprising the step of:

performing exception processing in which a final image frame after exclusion of a blank scene detected at the end of the dynamic image in said detecting step is deemed a scene-change frame.

93. (Canceled)

94. (Previously presented) The image processing method according to claim 90, wherein when a time duration for each scene-change frame of two scenes in close proximity is less than the specified duration, frame information from a scene-change frame of the first scene and frame information through a frame from the scene-change frame of

the second scene are treated as the result of merging of the scene-change frames of the two scenes into one scene whose duration is equal to the specified duration.

95. (Canceled)

96. (Previously presented) The image processing method according to claim 92, wherein when a duration for each between scene-change frame of two scenes in close proximity is less than the specified duration, frame information from a scene-change frame of the first scene and frame information through a frame from the scene-change frame of the second scene are treated as the result of merging of the scene-change frames of the two scenes into one scene whose duration is equal to the specified duration.

97. (Canceled)

98. (Previously presented) The image processing method according to claim 94, wherein when the duration of the scene-change frame of the second scene to be merged falls within a specified duration of the scene-change frame of the first scene, all the frame information of the scene-change frame of the second scene are merged with the scene-change frame of the first scene.

99. (Canceled)

100. (Previously presented) The image processing method according to claim 96, wherein when the duration of the scene-change frame of the second scene to be merged falls within a specified duration of the scene-change frame of the first scene, all the frame information of the scene-change frame of the second scene are merged with the scene-change frame of the first scene.

101. (Canceled)

102. (Previously presented) The image processing method according to claim 98, wherein when a mode has been indicated which provides a target duration for the completed digest dynamic image, a digest having a duration in the vicinity of the target duration is prepared by first finding all of the scene-change frames of the dynamic image, and then performing processing for merging scenes into the digest, preferentially beginning with scenes whose scene-change frame has a low degree of similarity to the immediately preceding frame or some preceding frames.

103. (Canceled)

104. (Previously presented) The image processing method according to claim 100, wherein when a mode has been indicated which provides a target duration for the completed digest dynamic image, a digest having a duration in the vicinity of the target duration is prepared by first finding all of the scene-change frames of the dynamic image, and then performing processing for merging scenes into the digest, preferentially beginning

with scenes whose scene-change frame has a low degree of similarity to the immediately preceding frame or some preceding frames.

105. (Canceled)

106. (Original) The image processing method according to claim 102, wherein when there are few scene changes, and the digest dynamic image is more than a certain threshold value shorter than the indicated duration, a digest having a duration in the vicinity of the target duration is prepared by gradually increasing the specified duration for addition of each scene.

107. (Canceled)

108. (Original) The image processing method according to claim 104, wherein when there are few scene changes, and the digest dynamic image is more than a certain threshold value shorter than the indicated duration, a digest having a duration in the vicinity of the target duration is prepared by gradually increasing the specified duration for addition of each scene.

109. (Canceled)

110. (Original) The image processing method according to claim 106, wherein for a dynamic image for which no scene change has been detected, if there is a blank scene at the beginning of the dynamic image, the blank scene is excluded, and frames are extracted from the first non-blank scene for the target duration and treated as the digest dynamic image.

111. (Canceled)

112. (Original) The image processing method according to claim 108, wherein for a dynamic image for which no scene change has been detected, if there is a blank scene at the beginning of the dynamic image, the blank scene is excluded, and frames are extracted from the first non-blank scene for the target duration and treated as the digest dynamic image.

113. (Canceled)

114. (Currently amended) A computer-readable recording medium recording program code of an image processing method comprising the steps of:

- calculating a degree of similarity from among a plurality of image frames of dynamic image data;
- determining scene-change frames based on the calculated degree of similarity; and

performing automatic editing and preparation of a digest dynamic image of the dynamic image data by merging from each scene delimited by a scene change a specified duration of frames having a low degree of similarity with an immediately preceding frame or some preceding frames on receipt of instructions to prepare a dynamic digest such that the prepared digest dynamic image has a length according to a length designated by a user.

115. (Currently amended) A computer-readable recording medium recording program code of an image processing method comprising the steps of:

- calculating a degree of similarity from among a plurality of image frames of dynamic image data;
- determining scene-change frames based on the calculated degree of similarity; and
- performing automatic editing and preparation of a digest dynamic image of the dynamic image data by merging from each scene delimited by a scene change a specified duration of frames having a high degree of similarity with an immediately preceding frame or some preceding frames on receipt of instructions to prepare a quiet digest such that the prepared digest dynamic image has a length according to a length designated by a user.